VEGETABLES MARKETING IN INDIA: A STUDY OF VARANASI DISTRICT IN UTTAR PRADESH

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India is one of the important horticulturally rich countries of the world, having varied agro-climatic conditions enabling it to produce almost all types of vegetables in one or other parts. It is the second largest vegetable producers of the world, sharing 12% of total world vegetable production. In the country vegetables occupy 6.5 million hectare area and around 91 million tones of production, but still it fails to meet the basic requirements of ever increasing population because of low productivity and huge post harvest losses from farmers field to market and finally to consumers' hand. Comparing the productivity of major vegetable crops in world scenario, we find India in most of the cases even less than world average productivity.

Productivity of major vegetable crops in world scenario

Crop	India			Country with highest Productivity				World		
	1998	1999	2000	Country	1998	1999	2000	1998	1999	2000
Brinjal	15.9	16.2	16.3	Japan	32.1	32.7	36.7	16.3	16.2	16.7
Cabbage	23.4	22.9	22.9	Korea Rep.	50.8	55.1	59.0	24.1	21.0	21.3
Cauliflower	18.4	19.0	18.3	Germany	24.9	26.2	27.6	18.8	17.9	17.8
Peas	09.6	09.9	09.4	France	15.5	16.5	16.2	08.3	08.2	07.9
Onion	11.4	09.9	10.5	Japan	45.9	50.0	46.2	17.3	17.0	17.2
Potato	17.6	18.6	18.4	Netherlands	43.0	44.8	45.2	16.5	16.4	16.5
Tomato	17.7	16.3	15.9	USA	65.2	59.2	66.7	28.3	26.9	27.2

Source: NHB database

Therefore to overcome the productivity gap and enhancing the production of vegetables, reducing the post harvest losses at different stages of marketing, apart from adopting advanced technologies of vegetable productions is most essential. In a study shows that overall post harvest losses in vegetable at different stages was around 17.26 percent, which varied from 5.86, 10.59 and 0.81 percent at farm, market and consumers level respectively (Gauraha, 1999). Certain vegetables like tomato contribute maximum losses after harvesting at different stages. In a study conducted at Varanasi district of Utter Pradesh the losses in tomato is estimated as 26.57%.

Estimates of post harvest losses of vegetable crops in Varanasi

Vegetable crops	Farm level	Wholesale	Retail	Total
Tomato	7.49	8.97	10.11	26.57
Cabbage	1.27	6.41	4.24	11.92
Cauliflower	2.8	7.75	4.21	14.76
Chilli	2.79	3.87	3.31	9.47
Brinjal	3.15	7.56	5.93	16.64

Losses in vegetable crops occur mostly at retailers level who are the key persons involved in marketing of vegetables. The development of any vegetable crop depends on its net income, which is solely based that how efficiently the produce is marketed. Due to high perishability and seasonality, efficiency of marketing operations in vegetables is crucial

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in determining the profit of the produce on one hand and level of satisfaction of consumers on the other. It is essential to be very careful about the marketing of vegetables in which the negligence may cause not only wastage of resources but also dissatisfaction to the producers and consumers. In India two aspects relating to the movement of the vegetable from the farm to the consumers require consideration. The first concerns the channel through which the produce moves the agencies participating and the costs. The second concerns the flow patterns, the volume of such flows and the seasonality of such movements. In case of vegetables the typical marketing channels found in our country are (Mundar Ram, 1998).

- Grower–Consumer
- Grower–Retailer–Consumer
- Grower–Growers cooperative–Consumer
- Grower–Growers cooperative–Consumer Agent–Retailer–Consumer
- Grower–Forwarding Agent–Commission Agent–Retailer–Consumer
- Grower–Growers Representative–Retailer –Consumer
- Grower–Wholesaler–Retailer–Consumer
- Grower–Wholesaler–Commission Agent–Retailer in distributing marker–Consumer
- Grower–Preharvest Contractor–Commission Agent in assembling market–Commission Agent in distributing market–Retailer–Consumer
- Grower–Commission Agent–Wholesaler–Retailer–Consumer

Thus, there is a multiplicity of interaction and involvement of a large number of market functionaries/intermediaries with consulting interests. The traders traditionally dominate the prevailing market systems. The producer–seller continuous to be the weakest link in the chain. Absence of infrastructure and improper management coupled with lack of market intelligence, credit etc. has made the system unfavourable to the growers. The marketing system in India by and large, operates under the normal forms of supply and demand. The trade of vegetable is still mainly in the hands of private enterprises. In Varanasi major marketing channels are :

- Farmers→wholesalers–cum–commission agent→retailer→consumers
- Farmers → retailers→consumers
- Farmers→wholesalers→retailers→consumers
- Farmers→wholesalers→consumers
- Farmers→retailers→consumers
- Farmers→local seller→consumers
- Farmers → consumers

Price Fluctuation in Vegetable :

Based on different agro-climate condition, India is divided into following eight zones

Agro-climatic zone	State
I. Humid Western Himalayan Region	Jammu & Kashmir (J& K), Himachal Pradesh and Uttranchal
II. Humid Bengal - Assam Basin	West Bengal and Assam
III. Humid Eastern Himalayan and Bay Islands	Sikkim, Meghalaya, Manipur, Nagaland, Mizoram, Tripura, Arunachal Pradesh and Andaman & Nicobar Islands
IV. Sub-Humid Sutlej Ganga Alluvial Plain	Punjab, Tarai region of U.P. and Bihar
V. Sub- Humid to Humid Eastern and South Eastern Uplands	Eastern M.P., Orissa and Andhra Pradesh
VI. Arid Western Plain	Rajasthan, Gujarat, Haryana and Delhi
VII. Semi Arid Lava Plateaux and Central High Lands	Madhya Pradesh (excluding eastern area) and Maharashtra
VIII. Humid to Semi Arid Western Ghats and Karnataka Plateaux	Karnataka, Tamil Nadu and Kerala

The price of vegetable varies from one zone to another according to the season, production and marketing. Due to transport facilities almost all the vegetables are available in the market of all the eight agro-climatic zones of country since due to its varied agro-climatic condition all the vegetables are grown in one or the other part of country round the year. The average wholesale market price situation in tomato, which is available in all the markets of the country round the year, is given below :

Price trend of tomato in different zones

Zone	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
I	869	633	615	801	613	626	872	1020	615	700	1098	752
II	755	267	219	433	907	1476	1431	1564	1118	1466	1688	1334
IV	631	344	367	352	306	639	1006	1244	821	807	1047	693
V	428	218	150	485	568	675	563	744	509	708	906	506
VI	540	357	343	351	272	505	932	988	532	650	941	519
VII	489	279	261	351	398	642	782	898	406	460	654	436
VIII	416	275	254	341	614	604	534	743	491	935	879	625

Source: NHB database

Like other places, in Varanasi (U.P., India) also vegetable market are spread both within and on peripheral of the city. In a study conducted to these markets it was found a significant difference among the prices of two sets of markets i.e., within city market and peripheral markets. A comparative of the two markets' price in a year is given below :

Rapid price fluctuation in vegetables shows how vegetable growers are suffering in getting the healthy price of their produce. A marketing network of wholesale vegetables markets of the country will certainly help the growers in getting/transporting their produce in other part of the country for better price.

Constraints in Marketing of Vegetable Crops :

1. Lack of cold storage facilities to fetch out the off-season prices of vegetable crops.
2. Absence of regulated markets for vegetable crops like food grains.
3. Variation in the prices within a week or even in a day.
4. Malpractices adopted by the commission agent at the time of auction/selling.
5. Lack of transportation for sending the produce to a distance.

A Step to Overcome the Constraints in Vegetable Marketing :

1. Improvement of Infrastructure Facilities and Services in Wholesale Markets–Considering the large volumes of vegetables handled in the wholesale markets, there is a need to construct new markets, modernize the existing ones and make them operationally efficient. The current wholesale vegetable markets are especially unhygienic and inefficient. These markets since form the supply base for exporters as well as up country markets and thus, badly require upgradation of services and facilities/creation of new ones. The computerization of market operation in these markets is also essential.

2. Development/Strengthening of Rural Markets–A rural market is the first contact points for producer-seller for encashing his produce. The vegetable growers with higher surplus generally takes their produce to nearby wholesale markets, while the small growers with limited surplus find it uneconomic to go to wholesale markets located at a distance place, so they sell their produce in local market. These local markets are mostly dominated by individuals or local bodies and are mainly interested in collection of revenues from these markets. These markets are not equipped with basic facilities like platform for sale, electricity, drinking water, link road, trader premises etc. In absence of more number of buyers, these markets become imperfect markets leading to less bargaining power among the farmers. Mostly small and marginal vegetable growers depend on local dealers for loans to meet their immediate requirements and social obligations, which also causes the farmers to sell their produce to these local dealers even at a lower price. Due to all these problems, the growers do not get the competitive price out of sale of their produce in these rural markets. The development of these markets is very necessary to ensure operational and pricing efficiency at this grass root level outlet. At farm level, farmers' organization, cooperatives, informal groups etc. should be encourages to develop/strength the marketing of vegetables.

3. Creation of Cold Storage and Packing House in Growing Regions/Markets– Considering the export potential of vegetable it is necessary to provide the facilities for grading and packing in the growing regions as well as in the vegetable markets by setting up cold storage grading and packinghouse. Certain activities like cleaning, washing, grading, packaging, refrigerated, these houses in conformity with the requirement of the trade can undertake transportation etc.

4. Promotion of Direct Marketing– Direct marketing by growers to consumers increases their share in consumers' rupee. It shortens marketing channel, eliminates middleman and brings producer-seller in direct contact with consumers. Direct marketing experiences in Punjab, Maharashtra etc. have been very successful.

5. Setting up of Market Com-Network–The availability of prompt and reliable market information about the market arrivals and prices for different commodities considerably improves the decision-making capacity of the farmers. Due to lack of such information farmers are left with no alternative but to dispose their produce in the nearest market even at unfavourable prices. A need has been felt to improve the existing marketing information system by linking all the wholesale vegetable market in the country with computers, which can be free access by users.

CONCLUSION

Since land is a limiting factor, therefore, to meet the basic requirement of vegetables of the rapid growing population of India, it is necessary to increase the productivity and reduce the losses in different stages of marketing. At the same time structure and function of vegetables markets is also required to be upgraded, so that the growers can get the actual price of their produce and which will also encourage them to grow more vegetables in an effective manner by adopting the advance technology of vegetable production.

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